

REMARKS

In the Office Action, claims 13, 15-18, and 20-38 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,750,926 to Schulman et al.

In response thereto, claims 13, 16, 22, 24, 26, 31-33, and 35 have been amended and new claims 39-47 have been added. Accordingly, claims 13, 15-18, and 20-47 are now pending. Following is a discussion of the patentability of each of the pending claims.

Interview Summary Record

Counsel thanks Examiner Hoekstra for the courtesy extended during the telephone conversation on January 11, 2007. The conversation was directed to proposed claim amendments in response to the Schulman et al. reference.

Independent Claim 13

Claim 13 recites a pressure sensor device implantable in a living body. The pressure sensor device comprises an insulating substrate that defines a feedthrough region, a pressure sensor having a first outer surface in contact with the insulating substrate and a second outer surface opposing the first outer surface, and a thin film of hermetic material encapsulating the pressure sensor and the substrate. An inner surface of the thin film directly contacts the second outer surface of the pressure sensor and an outer surface of the substrate to form a voidless encapsulation of the sensor and the substrate.

In accordance with the specification of the present application, pressure sensors such as a capacitive pressure sensor have a deflectable diaphragm to measure pressure changes. The thin film of hermetic material encapsulates the pressure sensor, including the diaphragm, to provide protection from the harsh environment of the human body and to provide protection to the human body in which it is implanted. Among the advantages of utilizing a thin film of hermetic material to protect the pressure sensor is that a diaphragm covered with such a material is sufficiently compliant to deflect in response to pressure changes.

The Schulman et al. reference is directed to hermetically sealed electrical feedthroughs that permits electrical connection between electronic circuits sealed within a hermetically sealed case and electrical terminals or contacts on the outside of the case. In the embodiment illustrated in Figure 5, an insulating substrate (100) defines a feedthrough region. A sensor (50) having a first outer surface is in contact with the insulating substrate and a second outer surface opposes the first outer surface. A lid (82) hermetically seals the sensor.

The Schulman et al. reference does not disclose or suggest an inner surface of a thin film directly contacting a second outer surface of a pressure sensor and an outer surface of the substrate to form a voidless encapsulation of the pressure sensor and the substrate. In the embodiment illustrated in Figure 5, the lid does not directly contact the second outer surface of the pressure sensor such that a void exists between the second outer surface of the sensor and an inner surface of the lid. As such, it appears that the void will prevent a pressure deflection of the lid to be transmitted to an outer surface of the sensor. Furthermore, the lid is a relatively rigid structure such that a pressure deflection will be inadequate to measure pressure changes.

Accordingly, it is respectfully submitted that claim 13 is in condition for allowance.

Dependent Claims 15-18, 20, 21, and 39-41

Claims 15-18, 20, 21, and 39-41 depend from claim 13 and are similarly patentable. Accordingly, it is respectfully submitted that these claims are in condition for allowance.

Independent Claim 22

For at least some of the reasons discussed above with regards to claim 13, it is respectfully submitted that claim 22 is in condition for allowance.

Dependent Claims 23-30 and 42-44

Claims 23-30 and 42-44 depend from claim 22 and are similarly patentable. Accordingly, it is respectfully submitted that these claims are in condition for allowance.

Independent Claim 31

For at least the same reasons discussed above with regards to claim 22, it is respectfully submitted that claim 31 is in condition for allowance.

Dependent Claims 32-38 and 45-47

Claims 32-38 and 45-47 depend from claim 31 and are similarly patentable. Accordingly, it is respectfully submitted that these claims are in condition for allowance.

CONCLUSION

In light of the above claim amendments and remarks, it is respectfully submitted that the application is in condition for allowance, and an early notice of allowance is requested.

Respectfully submitted,

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